

Appln. No.: 10/651,115  
Amendment Dated December 28, 2006  
Reply to Final Office Action of November 2, 2006

TN285

**Amendments to the Drawings:**

The attached drawing sheet includes changes to Figure 1. Figure 1 has been amended to include numeral 12', which identifies a portion of the base. This sheet replaces the original sheet.

Attachment

**Remarks/Arguments:**

**Preliminary Matters**

Claims 1-7 and 9-21 are presently pending and all pending claims stand rejected. Claims 1, 6, 10, 15, 18, 20, and 21 are herein amended. Support may be found throughout the specification as originally filed. For example, see the last full paragraph of page 3 ("One or more recesses..."). Applicants contend that no new matter is added. Reconsideration is respectfully requested in view of the above amendments and the following remarks,

**Objection to the Drawings**

Section one of the Office Action recites "The drawings stand objected to because it is unclear to the Examiner given Fig 1 of the present drawings, how the recess is defined by the base as described in claim 6." Applicants herein amend FIG. 1 to include reference numeral 12' and amends the specification to reference this numeral. Applicants contend that support for the amendment is found throughout the specification as originally filed. For example, see the last full paragraph of page 3 ("One or more recesses..."). No new matter is added. Applicants contend that this amendment obviates the objection, and withdrawal of the objection is respectfully requested.

**Objection to the Claims**

Section two of the Office Action recites "Claim 20 does not clearly distinguish if it is a dependent of claim 18." Applicants herein amend claim 20 to further clarify that it depends from claim 18 in accordance with the Examiner's interpretation used for examination. Accordingly, applicants respectfully request that the objection to claim 20 be withdrawn.

**Claim Rejection Under 35 U.S.C. 102(b):**

Section three of the Office Action recites that "Claims 1-7, 9-12, and 14-21 are rejected under 35 U.S.C. §102(b) as being anticipated by Hughes et al. (US 5,883,784)." Applicants respectfully submit that these claims are presently allowable over Hughes for at least the reasons set forth below.

Independent claim 1, as amended, recites features that are neither disclosed nor suggested by Hughes. These features include:

a plurality of thermally conductive heat dissipating fins  
extending perpendicularly from said base, *each fin having a length  
extending parallel to the base; and*

one or more recesses, each recess at least partially defined  
by adjacent parallel faces of *two adjacent fins extending  
perpendicularly from said base, the recesses being defined in part  
by surfaces extending along the length of the fins parallel to the  
base*, having a depth smaller than the height of said fins, and  
configured to support the edge of a circuit card.

This means that recesses are partially defined by two adjacent fins that extend  
perpendicularly from a base and have lengths that extend parallel to the base. Additionally,  
recesses are also partly defined by surfaces that extend along the length of the fins that are  
parallel to the base.

In Hughes, recesses extend along the length of fins perpendicular to the base.  
Hughes, however, is devoid of any teaching, suggestion, or motivation of recesses being  
defined in part by surfaces extending along the length of the fins parallel to the base as  
recited in claim 1. Orientation of the recesses in claim 1 allow air flow through the recesses  
to facilitate heat dissipation. This feature can be found in the last full paragraph on page 3  
to the first full paragraph on page 4 of the applicants' application. Thus, applicants contend  
that Hughes fails to disclose, teach, or suggest each and every limitation of amended claim  
1. As all claim limitations are unmet by Hughes, withdrawal of the rejection of claim 1 as  
anticipated by Hughes is respectfully requested.

Independent claims 10, 15, 18 and 21, as amended, while not identical to claim 1,  
include features similar to the allowable features discussed above with respect to claim 1.  
Accordingly, applicants contend that independent claims 10, 15, 18, and 21 are also  
allowable over Hughes for at least the reasons set forth above.

Claims 2-7, 9, 11, 12, 14, 16, 17, 19, and 20 include all the features of the  
independent claims from which they ultimately depend. Therefore, applicants contend  
claims 2-7, 9, 11, 12, 14, 16, 17, 19, and 20 are also allowable for at least the reason their  
respective base claims are allowable. Accordingly, withdrawal of the rejections of claims 2-  
7, 9, 11, 12, 14, 17, 19, and 20 as anticipated by Hughes is respectfully requested.

Section three of the Office Action further recites "Claims 1 (Alternatively) and 7 are  
rejected under 35 U.S.C. §102(b) as being anticipated by Lo (US 6,360,812)." Applicants  
submit that these claims, as amended, are allowable over Lo for the reasons set forth below.

As explained above with reference to Hughes, claim 1 recites, among other things, a heat sink comprising "one or more recesses, each recess at least partially defined by adjacent parallel faces of two adjacent fins extending perpendicularly from said base, the recesses being defined in part by surfaces extending along the length of the fins parallel to the base, having a depth smaller than the height of said fins, and configured to support the edge of a circuit card."

Claim 1 differs from that of Lo in that Lo fails to disclose, teach, or suggest a heat sink having recesses configured to support an edge of a circuit card. Furthermore, Lo fails to disclose, teach, or suggest recesses defined by "adjacent parallel faces of two adjacent fins" and "by surfaces extending along the length of the fins parallel to the base." The Office Action on page 9 reproduces Figure 1 from Lo and appears to equate a recess in accordance with claim 1 with a recess formed from a single fin that diverges at a position away from the base as depicted in Figure 1 of Lo. Thus, Lo suggests recesses defined by diverging portions/surfaces of a single fin. Further, the diverging portions/surfaces of the single fin are not perpendicular to the base, but are rather positioned at acute angles with respect to the base. There is no disclosure, teaching, or suggestion in Lo (nor any of the applied references), however, of defining a recess with two adjacent fins extending perpendicularly from the base and by surfaces extending along the length of the fins parallel to the base, as set forth in claim 1.

It is because applicants' invention as recited in claim 1 has recesses defined by adjacent parallel faces of two adjacent fins that extend perpendicularly from the base and by surfaces extending along the length of the fins parallel to the base that the recesses of applicants' structure are able to support a circuit card in a stable manner. For example, the recesses defined by adjacent parallel faces of *two adjacent fins* that extend perpendicularly from the base provide greater surface area of the recesses to contact a portion of a circuit card.

For the reasons set forth above, applicants contend that amended claim 1 is allowable over Lo. Accordingly, applicants respectfully request withdrawal of the rejection of claim 1 as anticipated by Lo.

Claim 7 includes all the features of claim 1 from which it depends. Therefore, applicants contend claim 7 is allowable for at least the reasons that claim 1 is allowable. Withdrawal of the rejection of claim 7 as anticipated by Lo is respectfully requested.

**Claim Rejections Under 35 U.S.C. 103(a):**

Section four of the Office Action recites "Claims 10, 12 (alternatively), and 13 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lo (US 6,360,812) in view of Hughes et al. (US 5,883,784)." Applicants herein traverse the rejection of these claims and respectfully submit that these claims are allowable over Lo in view of Hughes for at least the reasons set forth below.

Independent claim 10, as amended, recites features that are neither disclosed nor suggested by Lo and Hughes. These features include:

*the recess extending parallel to the base and...positioning the edge of the circuit bard in the recess by advancing the card in the recess in a direction parallel the base.*

As discussed above, Lo fails to disclose, teach, or suggest a heat sink having recesses configured to support an edge of a circuit card. Thus, Lo does not disclose, teach, or suggest positioning the edge of a circuit card in the recess by advancing a card in direction parallel to the base.

Claim 10, as amended, differs from that of Hughes in that Hughes teaches advancing circuit cards in the recess in a direction perpendicular to the base. Hughes fails to disclose, teach, or suggest positioning the edge of a circuit card by advancing a card in a direction parallel to the base.

As such, the combination of Lo in view of Hughes does not disclose, teach, or suggest each and every limitation of claim 10. Accordingly, applicants submit that claim 10 is allowable and withdrawal of the rejection of claim 10 as obvious over Lo in view of Hughes is respectfully requested.

Claims 12 and 13 ultimately depend from claim 10 and, thus, include all the limitations of claim 10. Accordingly, applicants respectfully submit that claims 12 and 13 are allowable over Lo in view of Hughes and withdrawal of the rejection of claims 12 and 13 as obvious over Lo in view of Hughes is respectfully requested.

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TN285

**Conclusion**

In view of the above amendments and remarks, applicants submit that this application is now in condition for allowance, which action is respectfully requested.

Respectfully submitted,

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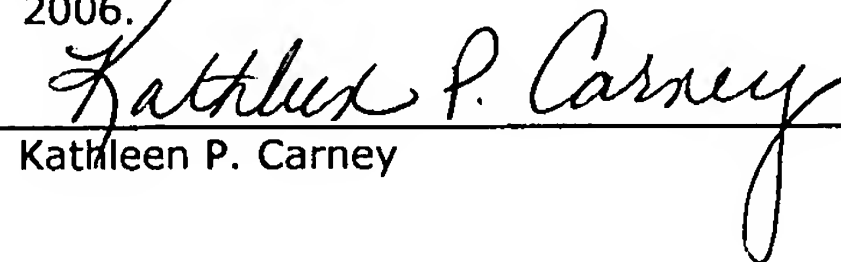
Attachment: Figure 1 (1 sheet)

Dated: December 28, 2006

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The Director is hereby authorized to charge or credit Deposit Account No. **18-0350** for any additional fees, or any underpayment or credit for overpayment in connection herewith.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on December 28, 2006.

  
Kathleen P. Carney